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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,767	09/27/2000	Scott B. Blum	042390.P9021	7450

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EXAMINER	
NGUYEN, ALAN V	

ART UNIT	PAPER NUMBER
2662	2

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/671,767	BLUM, SCOTT B.	
	Examiner	Art Unit	
	Alan Nguyen	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09/27/2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 11, line 12, "the frequently of a" should read -- the frequency in which a --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 7, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Leung (US 6,636,498).

Regarding **claims 1, 7, and 13**, Leung discloses method, machine-readable medium ***("The present invention relates to machine readable media", column 14, lines 15-16)*** and apparatus of a mobile router ***(figure 1)*** that comprises:

a first network interface card ***(element 8; column 17, lines 16-17 discloses how the network interfaces are typically implemented on network interface cards)*** that couples a first network ***(figure 1, element 12, 6)*** and a second network interface card ***(element 10)*** to couple to a second network ***(elements 14, 16)***;

a system controller ***(figure 10, element 1004; "A master central processing unit 1004:, column 17 line 1)*** that is coupled to a processor ***(element 1010)*** and coupled to an Input/Output controller hub ***(element 1028)*** that further couples to the first and the second network interface cards ***(element 1006,1008)***;

a memory subsystem ***(element 1012)***, having instructions for a protocol independent bridge device driver ***(Leung discloses a router that executes with the functionality of a bridge device, but explains on column 17, lines 61-62 that bridges can also be utilized. A bridge must require a device driver as an interface to the networks)***, which when executed by the processor, causes the system to intelligently bridge the first network and second network ***(Column 17, lines 3-9 discloses memory 1012 operates as part of the CPU is configured to store program instructions for network operations and agent mobility functions, such ads tunneling)*** by:

interfacing the bridge device with a first and a second network interface card driver ***(Inherent; The home agent NIC and foreign agent NIC have a connection to each other, as shown by elements "Registration", "Packet to MN2", and therefore must have a driver in order to have a connection)***;

adaptively deriving topology of the first and the second network from network packets received from the first and the second network ***(Column 2, lines 12-20 discloses the steps of the Home and Foreign Agents communicating the conditions of the Mobile Node's jump to the Foreign Agent. Each agent updates a table to specify the location of the mobile node. In effect, the Mobile Node's home base IP address has been shifted to the Foreign Agent IP address. Subsequent messages sent to the Mobile Node will be re-routed from the Home Agent to the Foreign Agent)***; and

delivering the received network packets based on information contained in the received network packets and the derived topology ***(Column 2, lines 33-40 discloses the Home Agent receives the packet and uses the address to lookup in the mobility binding table, and then forwards the packet to the correct Agent)***.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the

invention was made.

5. Claims 2, 6, 8, 12, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung in view of Machin et al (US 6,243,753).

Regarding **claims 2, 6, 8, 12, 14 and 18**, Leung uses an intermediate driver to bridge together the first network and the second network.

Leung fails to disclose where the driver interface is a standardized driver interface as regarded in claims 2, 8, and 14. Leung also fails to disclose where the standardized driver interface further refers to a Network Driver Interface Specification (NDIS), as regarded in claims 6, 12, and 18

Machin, however, discloses the use of an NDIS in his bridging system ***(Column 4, lines 45-50 discloses the use of NDIS)***.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leung's apparatus to include the feature of having the bridge device driver to utilize NDIS, as taught by Machin. The motivation is a cross platform support of network card device drivers and transport protocol drivers. The integrating component reduces development complexity of connected drivers as stated my Machin.

6. Claims 3, 9, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung in view of Machin as applied to claims 2, 6, 8, 12, 14 and 18 above, and further in view of Shannon (US 6,233,618).

Regarding **claims 3, 9, and 15**, with the features in parent claim 2, 8, and 14, addressed above, respectively, Leung, as modified, discloses translating

instructions from the protocol driver, the standardized driver interface and the first and the second network interface card drivers to effectuate transparency of the bridge device driver ***(Column 2, lines 21-30 explains that through the use of the Home Agent, Foreign Agent, and the interfaces to the network, packets are sent to a bridge device directly from the Home Agent to the Foreign Agent)***:

Leung fails to expressly disclose the use of an application programming interface (API) for the standardized driver interface.

Shannon, however, discloses an access control technique for bridges that utilizes an API to detect certain fields in packets. ***(Column 13, lines 35-40)***.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leung's apparatus to include an application programming interface between the network interface cards and the bridge, as taught by Shannon. The motivation is a more versatile system that allows a network device to screen any selected packet field for information, such as addresses and data in packets, as explained by Shannon in column 13, lines 36-39.

7. Claims 4, 5, 10, 11, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung in view of Machin as applied to claims 2, 6, 8, 12, 14 and 18 above, and further in view of Hoare et al (US 4,627,052) hereinafter Hoare.

Regarding **claims 4, 10, and 16**, Leung, as modified, discloses the

limitations in base claims 1, 7, and 13.

Leung fails to disclose where generating and modifying entries of unmatched source addresses and associated network information of the received network packets in a distribution table.

Hoare, however, discloses a bridge network that receives an incoming packet and compares the source address of the packet with the contents of the table, and if no match is found, enters that source address into the table ***(column 1, lines 65-68)***.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leung's apparatus to include the feature of having the ability generate entries of unmatched source addresses and associated information of received packets, as taught by Hoare. The motivation is a less dependent system that has contents of a distribution table built up by the bridge by a learning process as stated by Hoare.

Regarding **claims 5, 11, and 17**, with the features in parent claim 4, 10, and 16, addressed above, respectively, Leung, as modified, further fails to expressly disclose filtering the received network packets by comparing source addresses of the received network packets to the generated entries of unmatched source addresses Hoare, however, further teaches the use of address filtering ***("Comparing the source addresses of packets transmitted over the first network with the contents of said table and, if it is detected that the source address of a packet is not held in said table, entering that source address into the table", column 2, lines 1-4)***, and delivering the filtered

received network packets according to their destination addresses, packet types, and information in the distribution table ***("Address filtering in this manner requires the interconnection device to hold a table or record of the addresses of all stations in the remote network so that it can forward a packet only if its destination address matches one of those held", column 1, lines 36-39)***. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leung's apparatus to include the feature of having the ability to do address filtering by comparing the received packets to the unmatched packets, as also taught by Hoare. The motivation is a more efficient system that reduces the amount of packets transmitted in each of the individual networks, as stated by Hoare in column 1, lines 40-43.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to bridge networks:

US Patent (6,621,810) to Leung

US Patent (6,483,812) to Prorock

US Patent (6,614,764) to Rodeheffer et al

EPO Patent (1161032 A2) to Shimizu et al

The following patent is cited to show the state of the art with respect to standard driver interfaces:

US Patent (6,590,861) to Vepa et al

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 703-305-0369. The examiner can normally be reached on 9am-6pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

AVN
December 18, 2003

RICKY NGO
PRIMARY EXAMINER